THE
EUGENICS REVIEW

FRANCIS GALTON,

1822—1911.

SIR FRANCIS DARWIN, F.R.S.[1]

FRANCIS GALTON was born on February 16th, ninety-two years ago, and to-day we are met together to remember him—a word that seems to me more in tune with his nature than the more formal expression *commemorate*.

He disliked pomposity, but he seems to have loved little private ceremonials. For instance, when he opened the first notebook in preparation for his autobiographical *Memories*, he began page 1 with Falstaff's words: "Lord, Lord, how subject we old men are to this vice of lying." An inverted appeal to Truth which no man ever stood less in need of. And again at the foot of the very last page of his *Memories* is a drawing of *Galtonia candicans*, a little ceremony without words, a hieroglyphic glorification of the honour paid him in giving his name to this African plant.

Many persons, and even some reviewers, form their opinions of books by reading half-a-dozen passages at random. I have been more scientific in selecting the first and last pages, and from these I conclude that a simple and kindly commemoration is not out of harmony with the genius of this great and loveable man.

I should like to express my appreciation of the honour done me in asking me to give the first Galton lecture. In many ways I am a bad choice, since I have had no share in his science of eugenics, neither has my research-work been directly connected with evolution. I can only hope that in consideration of my delight in the fibre and flavour of Galton's mind, with its youth, its charm of humour, and its ever-springing originality and acuteness, I say that I hope

[1] Being the first Galton Lecture, delivered before the Eugenics Education Society, Feb. 16th, 1914.

these considerations may excuse me for having undertaken an office for which I am in so many ways unfitted.

One of his most obvious characteristics was his love of method; I do not mean methodicalness, but that he took delight in knowing how to do all manner of things in the very best way. He also liked to teach his methods to others. Those who never saw him, or even read his books, will exclaim "What a bore he must have been." You might as well call the lightening a bore for explaining that it was going to thunder, or complain of the match for boring the gunpowder as to the proper way of exploding. With Galton's explanations there was a flash of clear words, a delightful smile or gesture which seemed to say: "That's all—don't let me take up your time." Nobody was ever more decidedly the very antithesis of a bore than Francis Galton.

He first appeared on the literary and scientific stage as a traveller, geographer, and author of a book on South Africa (1853), and it was the experience there gained that enabled him to write two years later, in 1855, that wonderful book "The Art of Travel." There he teaches such vitally important things as how to find water, how to train oxen as pack animals, to pitch a tent, to build a fire, to cook, and a thousand other secrets.

He liked, of course, to be useful to weary and thirsty travellers, but he was as much, or more impelled by the love of method for its own sake. He was in fact an artist in method. The same thing is shown in a letter he wrote to "Nature" near the end of his life explaining how to cut a round cake on scientific principles so that it shall not become stale. This again was not so much a philanthropic desire that his fellow men should not have dry cake, as delight in method.

When I re-read "The Art of Travel" quite recently, I could not find his method of preventing a donkey braying. My recollection is that, observing a braying donkey with tail erect, he argued if the tail were forcibly kept down, as by tying a stone to it, that braying would not occur. I certainly believe myself to have read or heard that this most Galtonian plan succeeded. If anyone can tell me where to look for it I shall be grateful.

Later in life he tried to make his unique knowledge of use to his country. He writes[1] :—

"The outbreak of the Crimean War showed the helplessness of our soldiers in the most elementary matters of camp-life. Believing that something could be done by myself towards removing this extraordinary and culpable ignorance, I offered to give lectures on the subject, gratuitously, at the then newly-founded camp at Aldershot."

He received no answer from the War Office, but a personal application to Lord Palmerston led to his being installed. He speaks of a few officers attending his course, and adds that the "rude teachings of the Crimean War soon superseded" his own. The chief interest of the episode is the evidence it gives of great and elaborate pains spent in the teaching of methods.

I must here be allowed to turn back to an earlier period of his life in relation to what I have been speaking of. In illustrating the different dispositions of his sisters, both of whom were dear to him, Galton writes[2] :—

"My eldest sister was just, my youngest merciful. When my bread was buttered for me as a child, the former picked out the butter that filled the big holes, the latter did not. Consequently I respected the former, and loved the latter."

Have we not here an early appreciation of method or must we merely class the memory with the scene in "Great Expectations," where the terrifying elder sister, Mrs. Joe, prepares bread and butter for her husband and for Pip (her little brother) in an eminently just and disagreeable manner. May I be allowed to add that a love of butter in the big holes is not hereditary in my branch of the family; I should have loved the sister who picked it out.

At a later stage in his boyhood, Galton transferred his study of method from his sisters to his schoolmasters. He describes what he suffered from the absurd limitations, which still exist, in the education of English boys, and "chafed" at the teaching he received. "Grammar," he says, "and the dry rudiments of Latin and Greek were abhorrent to me, for there

[1] Memories, p. 163.

[2] Memories, p. 14.

seemed so little sense in them."[1] He suffered in fact like his cousin, Charles Darwin, who groaned over the classics at Shrewsbury School, and forgot what he learned, even to some of the Greek letters, by the time he was nineteen.

In 1838, when Galton was sixteen years of age, he became an indoor pupil at the Birmingham General Hospital. Here the education was practical enough to suit even his scientific mind, but to this coddled generation it seems a rough introduction to medicine. He had to prepare tinctures, extracts, decoctions, and learned to make pills by hand—a slow enough process. In later life, when he saw a pill-making machine at work, it must have been his boyish memories which inspired the characteristic calculation that if a grandmotherly Government possessed forty-five of these engines, it could supply each inhabitant of the British Isles with one pill per diem.[2] But this is a digression.

It was in the surgery that he had most experience; he and the other indoor pupils were called up at all hours to dress burns, to patch broken heads, and reduce dislocations, with, as it seems, very little instruction. It was doubtless a fine bit of education in self-reliance, and he must have learned much that was of use in South African travels. Whether as a student of method he approved of his rough and ready education is not quite clear. His genius for experiment, or rather that priceless capacity for extracting unexpected conclusions from experience, comes out in his account of a case in the Birmingham Hospital.[3] An injured drayman was brought in dead drunk, and underwent amputation of the legs without any sign of feeling pain. This set Galton wondering whether patients might not with advantage be made drunk before operations—a query which was soon happily answered by the discovery of anæsthetics.

Another most characteristic event was his desire to learn the properties of all the drugs in the pharmacopœia by personal experience. He determined to dose himself alphabetically, but

[1] Memories, p. 20.

[2] Memories, p. 28.

[3] Memories, p. 35.

got no further than C., for the effects of croton oil put a stop to his thirst for first-hand knowledge.

We must pass over his time at King's College, London, where, as he sat at lecture, he could see the "sails of the lighters moving in sunshine on the Thames,"[1] a vision which stirred his blood with a longing for adventure, and which, as he characteristically noticed, always occurred when the weather-cock on the Horse Guards showed that the south-west wind was blowing.

We must, in like manner, skip his undergraduate days at Trinity, Cambridge. We thus arrive by a devious route at the period when he returned a traveller and geographer of recognized merit, and began the work with which he was practically connected for many years, as a member of the Meteorological Committee.[2] His best-known contribution in the science was in a paper read before the Royal Society in 1862, where his discovery of the anticyclone was first described; but he also had a good deal to do with the printing and publishing of the now familiar weather charts. Meteorology takes us from 1861 to 1863 that is nearly to 1865, when his first paper on Heredity appeared, which was at the same time his first paper on hereditary genius. This line of research was to form his chief claim to celebrity, and must be separately treated.

Meanwhile I wish to say something of his love of experiment which is a branch of his devotion to method. We only know of the more entertaining of his inquiries from his delightful book of *Memories,* but I cannot avoid the fear that he has left out many experiments even stranger than those he published. My father had a special affection for what in his own case he called "Fool's experiments." These are what, I am afraid, Galton may have omitted. Still there are records of some delightful lines of work.[3] He is probably the only man who ever attempted to solve by experiment the problem of free will and determinism. He limited his inquiry to the question whether there exists in human affairs such a thing as an

[1] Memories, p. 48.

[2] Memories, p. 233.

[3] Memories, p. 295.

"uncaused and creative action." The experiment, or rather self-observation was carried on (1879) for six weeks, almost continuously, and "off and on for many subsequent months." He found that with practice he could nearly always trace the "straightforward causation" of a given action, which at first seemed to have been performed "through a creative act, or by inspiration."[1]

Then there was his attempt to experience the feelings of the insane. "The method tried was to invest everything I met, whether human, animal, or inanimate, with the imaginary attributes of a spy."[2] The trial was only too successful; by the time he had walked 1½ miles to the cabstand at the east end of the Green Park "every horse in the stand seemed watching" him, "either with pricked ears, or disguising its espionage."[3] He adds that hours passed before this uncanny sensation wore off.

On another occasion he managed to create in his mind the feelings of a savage for his idol, the idol in his own case being a picture of Mr. Punch.

These experiments seem to me very characteristic of the man in their originality, their humour, and their unexpected measure of success, for personally, I should have prophesied failure in all. They have a special bearing on Galton's belief that a quasi-religious enthusiasm for eugenics may be built up. I have sometimes wondered that he should believe this great change so feasible, but I understood how he came to think so when I read of his strange power of impressing beliefs on himself, with such force as to leave a trail of discomfort in the mind after the make-believe had ceased.

These and similar trials were, I think, made in relation to his desire to weigh and measure human faculty in a broad sense. I remember his telling me of his experiments on the mind of the British cabman. His method was to use alternately two different forms of the address to which he wished to go. Thus on Monday he would tell the man to drive him home to 42,

[1] Memories, p. 295.

[2] Memories, p. 276.

[3] Memories. p. 276.

Rutland Gate, on Tuesday he would say "Rutland Gate, 42," and so on. My recollection is that the cabmen understood quickest the familiar formula in which the number precedes the name of the street.

There was also a characteristic experiment or inquiry into the intensity of boredom in a lecture audience, by counting the number of fidgets per man per minute. In this case to avoid the open use of a watch, he estimated time by the number of his own breaths, "of which there are fifteen in a minute." I hope my brother will forgive my adding that he found the Royal Geographical Society meetings good hunting-ground for fidgets, for as Francis Galton remarks: "Even there, dull memoirs are occasionally read."[1]

Lastly, I must mention his plan of marking, by means of a hidden apparatus, the beauty of the women he met in the streets of different towns. He classified them as pretty, ugly and indifferent, and I am glad that in his beauty map, London came out top; Aberdeen, I regret to say was at the bottom.

But in speaking of measurement of human faculty we have got quite out of any reasonably chronological sequence, for the book bearing that title appeared in 1883. But the estimation of human characteristics especially in relation to heredity was in Galton's mind several years earlier, and in 1865 he wrote the two papers in *Macmillan's Magazine* which contain the germs of his later work on heredity and eugenics. It is unfortunate that the research on heredity, together with its practical application to human welfare in the new science of eugenics, should not have more space given to it in his autobiographical *Memories*; there are but thirty-seven pages—or 11 per cent of the whole book. The specific importance of the subjects here dealt with is so great that these thirty-seven pages outweigh, for this Society, all the rest of the book. We should like to have had a fuller account by the author of this remarkable work of 1865. He does, however, tell us—and it is a very striking statement—that the two articles "expressed then, as clearly as I can do now, the leading principles of Eugenics."[2] The chief point in

[1] Memories, p. 278.

[2] Memories, p. 312.

which he came to differ from the Macmillan articles was that he was then "too much disposed to think of marriage under some regulation, and not enough of the effects of self-interest and of social and religious sentiment."[1]

I imagine that the pendulum has now swung the other way, and that one of the most hopeful and practical schemes is the prevention of marriage among habitual criminals and the feeble-minded.

Galton attributes his work in heredity in some measure to the publication of the *Origin of Species* which, he says, "made a marked epoch" in his "mental development as it did in that of human thought generally."[2]

That Galton personally felt no difficulty in assimilating the new doctrine, he characteristically ascribes to a "bent of mind that both its illustrious author" and himself had "inherited from" their "common grandfather, Dr. Erasmus Darwin."[3] But in our day the name of Galton is intimately connected in our minds with the science of heredity, and we forget that he, like lesser men, was as a mine fired by the *Origin*.

He was "encouraged," he says, "by the new views to pursue many inquiries which had long interested" him "and which clustered round the central topics of heredity." This was the charge with which the mine had been loaded,—the *Origin* was the fuse.

When that book was published in 1859, nearly everyone here to-night must have been too young to know anything of the great change in the colour of human thought which was ushered in. There are more who may remember how twelve years later when the *Descent of Man* came out, there was still plenty of clerical and other forms of foolish bitterness. But a man needs to have been in the full swing of mental activity in 1859 to perceive the greatness of the change due to the *Origin of Species*.

His two papers in *Macmillan's Magazine*, 1865, pp. 157 and 318, seem to me very remarkable and, as I have said, they

[1] Memories, p. 310.
[2] Memories, p. 287.
[3] Memories, p. 288.

are passed over too lightly by the author in his *Memories* (p. 310). They contain a statistical proof of the inheritance of intellectual and moral qualities.[1] And those who would allow the truth of this statement must further agree that it is the first statistical demonstration of this important fact that the world has seen. And he insists that the whole spiritual nature of man is heritable, so that in his opinion there are no traces of that new element "specially fashioned in Heaven"[2] which (he says) is commonly believed to be given to a baby at its birth.

The paper contains a very interesting discussion on the development of social virtues by natural selection. He gives, too, a characteristic explanation of that human attribute commonly known as original sin, the quality in fact which makes men yield to base desires against and in spite of their sense of what is right.

He says[3] that here "the development of our nature under Darwin's law of natural selection has not yet overtaken the development of our religious civilisation." It may be more briefly described as the conflict between the individual desires with the tribal instincts. It must be remembered that for all this discussion Galton had no *Descent of Man* to guide him.

I shall come back later to his clear and courageous statement of eugenics in 1865, meanwhile I must speak of heredity, a word, by the way, introduced by Galton and for which he seems to have been taken to task.

With regard to the machinery of reproduction the essay is remarkable for containing what is practically identical with Weismann's continuity of the germ-cell, and Galton's priority is acknowledged by that author. But in science the credit goes to the man who convinces the world, not to the man to whom the idea first occurs. Not the man who finds a grain of new and precious quality but to him who sows it, reaps it, grinds it and feeds the world on it. This is true of this very *Macmillan's Magazine* article. Who would know of these admirable views on Hereditary Genius and Eugenics, if this were Galton's only

[1] In Memories, p. 310, he criticises the statistical methods of this work.

[2] Memories, p. 316.

[3] Macmillan's Magazine, p. 327.

utterance? This is the grain which has increased and multiplied: and it is to-day familiar nutriment and is now assiduously cultivated by the Eugenics Education Society. But if *Natural Inheritance,* and *Hereditary Genius* had not been written; if the papers on eugenics had not appeared, and especially if he had not convinced the world of his seriousness by creating a eugenic foundation at University College, where his friend Professor Karl Pearson carries on the Galtonian traditions—why then the paper in *Macmillan* would have counted for very little. But it was not quite unnoticed. By my father it is referred to in the *Variation of Animals and Plants under Domestication.* Galton was encouraged and reassured by Darwin's appreciation of his work: his words in *Hereditary Genius*[1] are "I feel assured that, inasmuch as what I then wrote was sufficient to earn the acceptance of Mr. Darwin . . . the increased amount of evidence submitted in the present volume is not likely to be gainsaid." He was characteristically generous in owning his debt to the author of the *Origin of Species* and characteristically modest in the value he ascribed to my father's words of encouragement. The book on Hereditary Genius strikes me as most impressive. It seems as though the man whom the world had agreed to honour as an admirable and indeed a brilliant worker in geography and meteorology had suddenly grown big. He had shown himself to have the power of sustaining a weighty argument in strong and temperate phrase, speaking as a judge rather than an advocate, and to have definitely taken rank with Darwin, Lyell, Hooker and Huxley, men whose pens have dinted the world, leaving their ineffaceable mark on the road trodden by the march of science.

When I was working at the *Life and Letters of Charles Darwin,* I naturally asked Mr. Galton for leave to publish the letters he had received from my father. But he would not agree. Mr. Darwin, he said, had spoken far too kindly of his work and he preferred to keep the praise to himself. But later when he wrote his *Memories,*[2] he fortunately realised that it is

[1] Hereditary Genius, p. 2.

[2] He had already allowed Professor Seward and myself to publish them in *More Letters of Charles Darwin.*

wiser to think of the value to the world of such documents, than of private likes or dislikes. The letter my father wrote about *Hereditary Genius* which Galton says " made him most happy " begins :—

" I have only read about 50 pages of your book . . . , but I must exhale myself, else something will go wrong in my inside, I do not think I ever in all my life read anything more interesting and original."[1]

In reading this great book it is, I think, impossible to doubt about the strength of the work. The quiet relentless way in which his territory is pegged out, and the clear wisdom with which the very terms of the new science are defined are equally impressive. And for lighter enjoyment his illustrations are to be recommended. He has to settle precisely what he means by a man being *eminent* or *illustrious* before he can begin to ask are these qualities hereditary. An eminent man is one in four thousand, and to make clear what this implies, he writes, " On the most brilliant of starlight nights there are never so many as 4,000 stars visible to the naked eye at the same time; yet we feel it to be an extraordinary distinction to a star to be accounted as the brightest in the sky."[2] If we could imagine that each new night shows us a fresh set of stars, we might speculate as to how many nights we should watch the sky before we found one bright enough for Galton.

In the same way he tries to make us see a million, because in that number there is but one *illustrious* man. He worked it out in Bushey Park where he had gone to see the horse-chestnuts in flower, and came to the astonishing conclusion that taking one half only of the avenue and the flowers visible on the sunny side of that row, it would require 10 miles of avenue to give 1,000,000 spikes of blossom.

Later he defines *mediocrity* in a way not very flattering to those, who, like myself, live in the country. Mediocrity[3] then " defines the intellectual power found in most provincial gatherings, because the attractions of a more stirring life in the metro-

[1] Memories, p. 290.
[2] Hereditary Genius, p. 9.
[3] Hereditary Genius, p. 31.

polis and elsewhere are apt to draw away the abler classes of men, and the silly and imbecile do not take a part in the gatherings." On this last point, by the way, I am not convinced. The research on the heredity of mental and moral characters leads naturally to eugenics, as in the Macmillan paper of 1865. But before dealing with this I must say a few words about what, in the opinion of some, is Galton's chief claim to eminence—the study of heredity as a whole. There is no doubt that he was the first to treat thoroughly and in a strict statistical method, the steps by which one generation passes into the next. He was pre-eminently a lover of statistics, he was indeed what Goschen called himself: "A passionate statistician."

He used Gauss's Law of Error, which Quetelet had already applied to human measurements. "The primary objects," he says,[1] "of the Gaussian Law of Error were exactly opposed, in one sense, to those to which I applied them. They were to get rid of, or to provide a just allowance for errors. But these errors or deviations were the very things I wanted to preserve and to know about."

This conception of variation impressed him deeply, so that he remembered the exact spot in the grounds of Naworth Castle where it first occurred to him "that the laws of heredity[2] were solely concerned with deviations expressed in statistical units."

What may be called the final result of Galton's work in heredity is, I imagine, his *ancestral law,* namely that "the average contribution of each parent" to its offspring is one quarter, or in other words that half of the qualities of the child can be accounted for when we know its father and mother. In the same way the four grandparents together contribute one quarter and so on. He illustrates this by calculating how much Norman blood a man has who descends from a Baron of William the Conqueror's. Assuming that the Baron weighed 14 stone, his descendant's share in him is represented by 1/50 grain.[3]

[1] Memories, p. 305.
[2] Memories, p. 300.
[3] Macmillan, p. 327.

This side of Galton's work is, in the judgment of many, his greatest claim to distinction as a master in the science of heredity. How far this is so I shall not attempt to pronounce. It is possibly still too soon to do so. Nevertheless it seems to me that Mendelism (the main facts of which are no longer in dispute) will compel the world (if it has not already done so) to look at variation in a very different way to that of Galton. The Mendelian does not and never will look at variation merely as a "deviation expressed in statistical units." Nor can he accept the ancestral law, because he has convinced himself that some ancestors contribute *nothing* in regard to certain characters.

The contrast between Galtonism and Mendelism may be illustrated by an example which if not a strict analogy has in it something illuminating, especially for those who do not know too much of the subject. Galton seems to me like a mediæval chemist while Mendel is a modern one. Galton can observe, or can follow the changes that occur when two compounds are mixed. But he knows nothing of the mechanism of what occurs. But the Mendelian is like a modern chemist who calls the chemical elements to his aid, and is able to express the result of the experiment in terms of these elements. This is an enormous advantage, and if my analogy is to be trusted it would seem as though a progressive study of heredity must necessarily be on Mendelian lines.

But it obviously does not follow that the laborious and skilful work of Galton and his school is wasted. Those who wish to have made plain to them how Biometrics may illuminate a problem which cannot as yet be solved in Mendelian fashion should read Dr. Schuster's most interesting book on eugenics. I am thinking especially of the question as to the heredity of tuberculosis and cancer. The relation between Galtonism and Mendelism is also well and temperately discussed in Mr. Lock's *Recent Progress in the Study of Variation,* 1906.

But it is time to speak of Galton as a eugenist—on which if we look to the distant future his fame will rest. For no one can doubt that the science of eugenics must become a great and beneficent force in the evolution of man.

We must be persistent in urging its value, but we must also be patient. We should remember how young is the subject. As recently as 1901 Galton was, in his Huxley Lecture, compelled to speak of eugenics in these terms[1]:—

"It has not hitherto been approached along the ways that recent knowledge has laid open, and it occupies in consequence a less dignified position in scientific estimation than it might. It is smiled at as most desirable in itself and possibly worthy of academic discussion, but absolutely out of the question as a practical problem." After explaining that the object of his discourse was to "show cause for a different opinion," he goes on with what, in his restrained style, is strong language: "I shall show that our knowledge is already sufficient to justify the pursuit of this perhaps the grandest of all objects."[2]

At the close of the lecture he speaks out as to the difficulties and the pre-eminent value of eugenics and once more of the oppressive "magnitude of the enquiry."

No one who reads this lecture of Sir Francis Galton's is likely to let eugenics go with a smile and a remark that it is not a practical problem. It is one of the functions of the Eugenics Education Society to spread the sanely scientific views here set forth by Galton, and as far as I am able to judge the Society has and is doing sound work in this direction.

In another essay,[3] Galton discusses the meaning of the "Eu" in eugenics in a characteristic way. He imagines an attempt among the animals in the Zoological Gardens to establish a code of absolute morality. With customary love of detail, he supposes the inquiry to be undertaken by some animal such as a sparrow or a rat which is intelligent and has easy access to all the cages, and is therefore able to collect opinions. There would be strongly pronounced differences between the carnivorous animals and those which form their natural prey. There would be a general agreement as to maternal affection, though fishes and the cuckoo would laugh at it. But all would agree on *some* eugenic principles: That

[1] Essays in Eugenics, p. 1.

[2] Essays in Eugenics, p. 1.

[3] Essays in Eugenics, p. 35.

it is better to be healthy and vigorous than sickly and weak—well-fitted for their part in life rather than the reverse, in fact good specimens of their kind whatever that kind may be.

Sir Francis Galton goes on to give a list of qualities that "nearly every one except cranks would take into account in picking out the best specimens of his class." The list would "include health, energy, ability, manliness and courteous disposition."[1] I wish he had thought of eugenic mothers and had translated manliness into the feminine equivalents of courage and endurance. When I first read this list it struck me at once how highly distinguished was Galton himself in all these qualities. As we dwell on the qualities one by one, they seem to call up echoes from the image we have of his character. "Ability, manliness, and courteous disposition," how strong these were in him! I cannot help feeling that he might have added one more quality from his own treasure-house, namely, a sense of humour, which is so priceless an antiseptic to sentimentality, and was strongly and individually present in his character.

In this same lecture,[2] Galton sums up the stages in the development of eugenics (I.) "It must be made familiar as an academic question." (II.) As a practical subject worthy of serious consideration. (III.) It must be "introduced into the national conscience, like a new religion." He recapitulates in an eloquent phrase: "It has, indeed, strong claims to become an orthodox religious tenet of the future, for Eugenics co-operates with the workings of Nature by securing that humanity shall be represented by the fittest races. What Nature does blindly, slowly, and ruthlessly, man may do providently, quickly, and kindly."

Here we see the future of eugenics marked out for us, and the last sentence might well serve as a motto for this Society. How are we to work for the cause?

It is true that our opinions are formed by the daily papers, and our actions as a nation are determined by political parties which come and go largely by chance. But, however our

[1] Essays in Eugenics, p. 37.

[2] Essays in Eugenics, p. 42.

opinions originate, if they are strongly and persistently urged by a large majority of Englishmen, great changes in the manner of human life may be effected. Persistence is the great thing in all reforms, it is a case of my father's favourite quotation—"It's dogged as does it." Francis Galton has been temperately persistent in a marked degree. His caution and wisdom are illustrated by the dates of his writings on eugenics and heredity, which placed in order suggest a regiment at slow march, not a bunch of heroes rushing on a breach.

Two papers in Macmillan's Magazine	1865
Hereditary Genius	1869
Fraser's Magazine	1873
Human Faculty (word Eugenics first employed)	1884
Natural Inheritance	1889
Huxley Lecture	1901
Sociological Society Papers	1905
Memories	1908

The temperateness of his march is all the more striking when we remember the fiery impatience with which in *Hereditary Genius* he spoke of the harm done by the church by ordaining that the intellectuals, the literary, and the sensitive should be celibates, and of the wholesale slaughter by the Holy Inquisition of the courageous and clear minded who dared to think for themselves.

From the first he had the support of Charles Darwin who never wavered in his admiration of Galton's purpose, though he had doubts about the practicality of reform. His hesitation in regard to eugenic method is expressed with a wise proviso as to future possibilities: "I have lately been led," he says, "to reflect a little . . . on the artificial checks, but doubt greatly whether such would be advantageous to the world at large at present, however it may be in the distant future."[1] In the first edition of the *Descent of Man*, 1874,[2] he distinctly gives his adherence to the eugenic idea by his assertion that man might by selection do something for the moral and physical qualities of the race. It is a great thing that this Society should have

[1] More Letters, II., p. 43 and 50.

[2] One Volume Edit. 1894, p. 617.

had Francis Galton for its Hon. President. It entitles us to feel assured that in following the line of action marked out for ourselves we are on the right track, and that in the difficult pioneer work of helping the English public to realise the deadly need of eugenic reform we are following in Galton's steps. We are also so fortunate as to have received the encouragement and help at the hands of some of the leaders in the science of heredity, Weismann, Yves Delage, Ray Lankester, the late Adam Sedgwick, Poulton, Bateson, Punnett, and others.

Galton says somewhere[1] that great men have long boyhoods, this was certainly true of him, though I should rather describe as *youthful* the delightful qualities that never faded out of his nature. It is, I believe, the correct thing to speak of the "golden dreams of youth," and if by this hackneyed phrase we mean a keenly imaginative outlook, a hopefulness with a certain dash about it—a generous courage such as a hero of romance is credited with—then Francis Galton had undying youth. And this makes his seriously measured progress in eugenics all the more worthy of our admiration.

In one of the Macmillan articles (p. 324) he wrote: "Many plan for that which they can never live to see. At the hour of death they are still planning."

It was thus that Francis Galton died, and as year after year we meet together on February 16th, let us think of him and his plannings with affection and respect.

[1] Macmillan's Magazine, xii., p. 326.